

## REMARKS

This Amendment seeks to place this application in condition for allowance. Pending claims 1-25 have been deleted, without prejudice, and new claims 26-62 have been added to more fully protect certain aspects of the inventions described and illustrated in this application. No new matter has been added.

## OFFICE ACTION

In the Office Action mailed December 3, 2003 (hereinafter, "the Office Action"), all of the claims were rejected under 35 USC §112, 1st ¶, "as containing subject matter which as not described in the specification in such a away as to enable one skilled in the art. . ." (the Office Action, page 2). In this regard, the Office Action states that:

- (1) it is unclear from the specification where a predetermined value is from and how this value is obtained and how this predetermined value is related and associated with the first and second values from the first and second samples;
- (2) if two different samples are scanned and these scanned data are collected and compared against each other, how can one determine which sample is a defective.

Although the claims have been amended, given that the claims, as amended, may present the same or similar issues and/or include the same or similar terms or phraseology, each basis of this rejection will be addressed separately, in detail, immediately below.

### 35 USC 112, 1st ¶ -- Issues re: Predetermined Value

The predetermined value is a measure of an acceptable deviation between measured current values of a contact hole pattern of a first device (or area) on a

semiconductor wafer and a contact hole pattern of a second device (or area) on the same semiconductor wafer. (See, for example, the '528 Application, page 28, lines 21-25 and page 29, lines 25-27). When the measured current values are compared and a variation exceeding a predetermined value is determined, one of the two devices or areas can be considered as including a defect (the '528 Application, page 16, lines 1-2). Which contact hole pattern of the two devices or two areas includes a defective contact hole(s) is not known with certainty based solely on the comparison -- although in one embodiment, one of the contact hole patterns of the devices or areas is selected in a region of the wafer that typically is non-defective (i.e., the contact hole pattern includes a normal contact holes). (See, for example, the '528 Application, pages 16, lines 6-13).

The predetermined value may be related to, for example, the current value measured for a pattern of contact hole(s) of a "chip of other wafer processed through the same steps, data obtained from a test pattern, or a value estimated by ... simulation ...." (the '528 Application, page 28, lines 18-20). In this regard, how large a difference or deviation that is acceptable between measured current values of a contact hole pattern of a first device (or area) and a contact hole pattern of a second device (or area), relative to the predetermined value, is an issue of, for example, yield. (See, for example, the '528 Application, page 28, lines 21-25 and page 29, lines 25-27).

### **35 USC 112, 1st ¶ -- Determination of Defective Sample**

As mentioned above, the method of the present invention, as claimed, may not determine with absolute certainty, based solely on the comparison of the measured current values, which of the two devices or areas include a defective contact hole(s). Rather, when the comparison of the measured current values exceeds a predetermined value, one of the

two areas is considered to include a defective contact hole. (See, for example, the '528 Application, page 16, lines 1-2). Which contact hole pattern of the two devices or two areas includes a defective contact hole(s) is not known from the comparison of the measured current values. However, in one embodiment, the contact hole pattern of the first device or first area is located in a region of the wafer that typically is non-defective (i.e., the contact hole pattern includes normal or non-defective contact holes) and, in this embodiment, it may be assumed that the contact hole pattern of the second device or second area includes a defective contact hole(s). (See, the '528 Application, pages 16, lines 6-13).

**Support in the Specification for the Subject Matter of the Amended Claims**

As mentioned above, pending claims 1-25 have been deleted, without prejudice, and new claims 26-62 have been added to more fully protect certain aspects of the inventions described and illustrated in this application. The claims, as amended, are fully supported by the specification, as filed. No new matter has been added.

For the convenience of the Examiner, Applicant submits herewith a table that correlates certain portions of the specification to the amended claims. In particular, Applicant has attached a cross-reference table (4 pages in total) that correlates, on a claim-by-claim basis, the claims to exemplary portions in the application (as filed). There are many inventions and embodiments described and illustrated in the application. Other passages in the application, as filed, also support claims 26-62. It is not the intention of Applicant to provide an exhaustive list -- rather, the references to the specification are merely exemplary. As such, no inference or conclusion should be drawn that this table is exhaustive. Indeed, no inference or conclusion of any kind should be drawn from the

identification of certain portions of the specification and not others for, among other things, the purposes of claim interpretation.

**Information Disclosure Statement**

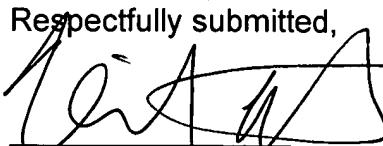
Applicant has submitted, in a separate correspondence, an Information Disclosure Statement ("IDS"), including Form PTO 1449 and a copy of reference identified and/or cited in applications that include similar subject matter, namely U.S. Application Serial Nos. 09/451,440 and 09/702,831. A copy of the IDS (and Form 1449) is attached hereto. It is respectfully requested that the Examiner make his consideration of the reference identified in the IDS formally of record with the next action.

**CONCLUSION**

Applicant respectfully requests entry of the foregoing Amendment. Applicant submits that all of the claims present patentable subject matter which definitely set forth the novel and unobvious features of the invention. Accordingly, Applicant respectfully requests allowance of all of the claims.

It is noted that should a telephone interview expedite the prosecution of this application in any way, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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